(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 1 April 2004 (01.04.2004)

PCT

(10) International Publication Number WO 2004/028030 A1

(51) International Patent Classification7:

H04B 7/005

(21) International Application Number:

PCT/EP2003/009781

(22) International Filing Date:

3 September 2003 (03.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

02256578.2 60/414,082

23 September 2002 (23.09.2002)

26 September 2002 (26.09.2002)

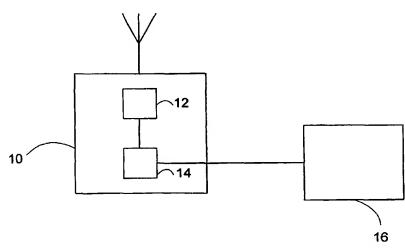
(71) Applicant (for all designated States except US): TELE-FONAKTIEBOLAGET L M ERICSSON (publ) [SE/SE]; S-126 25 Stockholm (SE).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): NILSSON, Johan [SE/SE]; Trulsibrunnsvägen 20 A, S-236 38 Höllviken (SE). BERNHARDSSON, Bo [SE/SE]; Spjutgränden 5, S-224 75 Lund (SE).
- (74) Agent: O'CONNELL, David, Christopher; Haseltine Lake, Imperial Hause, 15-19 Kingsway, London WC2B 6UD (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR POWER CONTROL IN A MOBILE RADIO SYSTEM



(57) Abstract: A telecommunications system for improving quality of service (QoS) to users via the implementation of an extended outer loop power control algorithm. A radio resource manager (RRM) operates to determine the number of channels allotted to users within a network at a certain time. The RRM implements the extended outer loop power control algorithm for each allotted channel, thus determining SIR reference values for each allotted channel. the RRM ensures that the SIR reference value for any channel does not fall bellow a predetermined minimum value. The SIR reference value to be used for all channels in use is determined as the highest of all the calculated SIR reference values. The extended outer loop power control algorithm can be implemented at a mobile station level, base station level or radio network controller level.



